

What is claimed is:

1. A control circuit for brushless DC motor equipped with protective circuit comprising:

a magnetism detector for detecting magnetic pole position of a rotor opposing to stators with an air-gap between said rotor and said stators, said stators being provided with stator windings of a single phase, and said rotor being rotatably supported and having N-S magnetic poles;

a logical circuit that receives output signal of said magnetism detector and generates two-phase half wave power supply signals;

power amplification semiconductor devices that amplify said two-phase half wave power supply signals and feed currents to said stator windings to rotate said rotor in a predetermined rotational direction;

a rotation detection circuit that receives AC signal of said output signal of said magnetism detector from said logical circuit and charges or discharges a locking detection capacitor;

a comparator that detects voltage at a not grounded end portion of said locking detection capacitor;

a reset circuit that receives output of said comparator and makes an output signal circuit in said logical circuit "ON" or "OFF" state according to said voltage of said locking detection capacitor;

a combination circuit that compounds outputs of said reset circuit and said logical circuit, and that outputs a locking detection signal; and

a current feed term setting means that maintains said output signal circuit in "OFF" state to completely cut off currents to said stator windings, when the number of repetitions of "ON" and "OFF" states of said output signal circuit of said logical circuit has reached a predetermined value.

2. The control circuit for brushless DC motor equipped with protective circuit according to claim 1, wherein said current feed term setting means comprises:

an AND circuit of which an input terminal is connected to outputs of said logical circuit, and of which another input terminal is connected to said locking detection signal of said combination circuit;

an integration circuit comprising an integration circuit resistor and an integration circuit capacitor, and connected to the output of said AND circuit; and

a second comparator that compares voltage at a not grounded end portion of said integration circuit capacitor with a reference voltage, and the output of which is connected to said not grounded end portion of said locking detection capacitor.